

**Amendments to the Claims:**

The following listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1-2. (Canceled).

3. (Currently Amended) A method for storing hydrogen, said method comprising a step wherein organic compound is brought into contact with hydrogen gas at a predetermined pressure, wherein said organic compound is capable of forming a hydrogen molecular compound by being brought into contact with hydrogen gas, and wherein said molecular compound is hydrogen clathrate containing said organic compound as a host compound.

4. (Cancelled)

5. (Currently amended) A method for storing hydrogen according to claim [[4]] 3, wherein said organic compound is at least one selected from the group consisting of monomolecular type host compounds, multimolecular type host compounds, and high-molecular type host compounds.

6. (Original) A method for storing hydrogen according to claim 5, wherein said monomolecular type host compound is at least one selected from the group consisting of cyclodextrins, crown ethers, cryptands, cyclophanes, azacyclophanes, calixarenes, cyclotrimeratrylenes, spherands, and cyclic oligopeptides.

7. (Original) A method for storing hydrogen according to claim 6, wherein said multimolecular type host compound is at least one selected from the group consisting of ureas, thioureas, deoxycholates, perhydrotriphenylenes, tri-o-thymotides, bianthrils, spirobifluorenes, cyclophosphazenes, monoalcohols, diols, acetylene alcohols, hydroxybenzophenones, phenols, bisphenols, trisphenols, tetrakis phenols, polyphenols, naphthols, bis-naphthols, diphenylmethanols, carboxylic amides, thioamides, bixanthene, carboxylic acids, imidazoles, hydroquinones, organic phosphorus compound, and organic silicon compound.

8. (Original) A method for storing hydrogen according to claim 7, wherein said multimolecular type host compound is at least one selected from the group consisting of urea, 1,1,6,6-tetraphenyl-2,4-hexadiyn-1,6-diol, 1,1-bis(2,4-dimethylphenyl)-2-propyn-1-ol, 1,1,4,4-tetraphenyl-2-butyne-1,4-diol, 1,1,6,6-tetrakis(2,4-dimethylphenyl)-2,4-hexadiyn-1,6-diol, 9,10-diphenyl-9,10-dihydroanthracene-9,10-diol, 9,10-bis(4-methylphenyl)-9,10-dihydroanthracene-9,10-diol, 1,1,2,2-tetraphenylethane-1,2-diol, 4-methoxyphenol, 2,4-dihydroxybenzophenone, 4,4'-dihydroxybenzophenone, 2,2'-dihydroxybenzophenone, 2,2',4,4'-tetrahydroxybenzophenone, 1,1-bis(4-hydroxyphenyl)cyclohexane, 4,4'-sulfonyl bisphenol, 2,2'-methylene bis(4-methyl-6-t-butylphenol), 4,4'-ethylidene bisphenol, 4,4'-thiobis(3-methyl-6-t-butylphenol), 1,1,3-tris(2-methyl-4-hydroxy-5-t-butylphenyl)butane, 1,1,2,2-tetrakis(4-hydroxyphenyl)ethane, 1,1,2,2-tetrakis(4-hydroxyphenyl)ethylene, 1,1,2,2-tetrakis(3-methyl-4-hydroxyphenyl)ethane, 1,1,2,2-tetrakis(3-fluoro-4-hydroxyphenyl)ethane, α , α , α' , α' -tetrakis(4-hydroxyphenyl)-p-xylene, tetrakis(p-methoxyphenyl)ethylene, 3,6,3',6'-tetramethoxy-9,9'-bi-9H-xanthene, 3,6,3',6'-tetraacetox-9,9'-bi-9H-xanthene, 3,6,3',6'-tetrahydroxy-9,9'-bi-9H-xanthene, gallic acid, methyl gallate, catechin, bis- β -naphthol, α , α , α' , α' -tetraphenyl-1,1'-biphenyl-2,2'-dimethanol, bis-dicyclohexylamide diphenirate, bis-dicyclohexylamide fumarate, cholic acid, deoxycholic acid, 1,1,2,2-tetraphenylethane, tetrakis(p-iodophenyl)ethylene, 9,9'-bianthryl, 1,1,2,2-tetrakis(4-carboxyphenyl)ethane, 1,1,2,2-tetrakis(3-carboxyphenyl)ethane, acetylene dicarboxyl acid, 2,4,5-triphenyl imidazole, 1,2,4,5-tetraphenyl imidazole, 2-phenyl phenanthro[9,10-d]imidazole, 2-(o-cyanophenyl)phenanthro[9,10-d]imidazole, 2-(m-cyanophenyl)phenanthro[9,10-d]imidazole, 2-(p-cyanophenyl)phenanthro[9,10-d]imidazole, hydroquinone, 2-t-butyl hydroquinone, 2,5-di-t-butyl hydroquinone, 2,5-bis(2,4-dimethylphenyl)hydroquinone, and trim-trylphosphine.

9. (Original) A method for storing hydrogen according to claim 8, wherein said multi molecular type host compound is at least one selected from the group consisting of 1,1-bis(4-hydroxyphenyl)cyclohexane, 1,1,2,2-tetrakis(4-hydroxyphenyl)ethane, 1,1,2,2-tetrakis(4-hydroxyphenyl)ethylene, tetrakis(p-methoxyphenyl)ethylene, tetrakis(p-iodophenyl)ethylene, 9,9'-bianthryl and 1,1,2,2-tetraphenylethane, bis(dicyclohexylamide)diphenirate, bis-dicyclohexylamide fumarate, α , α , α' , α' -tetraphenyl-1,1'-biphenyl-2,2'-dimethanol, 1,1,6,6-

tetraphenyl-2,4-hexadiyn-1,6-diol, and 2-(m-cyanophenyl)phenanthro[9,10-d]imidazole.

10. (Original) A method for storing hydrogen according to claim 5, wherein said high-molecular type host compound is at least one selected from the group consisting of celluloses, starches, chitins, chitosans, polyvinyl alcohols, polymers of polyethylene glycol arm type of which core is 1,1,2,2-tetrakis phenyl ethane, and polymers of polyethylene glycol arm type of which core is α , α' , α' -tetrakis phenyl xylene.

11. (Currently amended) A method for storing hydrogen according to claim [[4]] 3, wherein said organic compound is at least one selected from the group consisting of aromatic compounds, amide compounds, alcohol compounds, imidazole compounds, hydroquinones, ureas, corboxilic acids, cyclodextrines, polyphenols, cholic acids, celluloses, and organic phosphorous compounds.

12. (Original) A method for storing hydrogen according to claim 11, wherein said aromatic compounds are phenolic compounds.

13. (Previously presented) A method for storing hydrogen according to claim 3, wherein hydrogen gas is brought into contact with said organic compound at a pressure of higher than 0.1 MPa.

14. (Previously presented) A method for storing hydrogen according to claim 3, wherein hydrogen gas is brought into contact with said organic compound at a pressure between 0.1 MPa and 200MPa.

15-16. (Canceled).

17. (Currently amended) Hydrogen clathrate enclosing hydrogen which is formed by contact reaction between a host compound and hydrogen, wherein said host compound is ~~at least one selected from the group consisting of~~ monomolecular host compound ~~compounds~~, multimolecular host ~~compounds~~, high molecular host ~~compounds~~, and inorganic host

~~compounds~~, wherein said monomolecular host compound is at least one selected from the group consisting of cyclodextrins, crown ethers, cryptands, cyclophanes, azacyclophanes, calixarenes, cyclotrimeratrylenes, spherands, and cyclic oligopeptides.

18. (Currently amended) Hydrogen clathrate enclosing hydrogen which is formed by contact reaction between a host compound and hydrogen, wherein said host compound is ~~at least one selected from the group consisting of monomolecular host compounds, multimolecular host compound compounds, high molecular type host compounds, and inorganic host compounds,~~ wherein said multimolecular host compound is at least one selected from the group consisting of ureas, thioureas, deoxycholates, perhydrotriphenylenes, tri-o-thymotides, bianthryls, spirobifluorenes, cyclophosphazenes, monoalcohols, diols, acetylene alcohols, hydroxybenzophenones, phenols, bisphenols, trisphenols, tetrakis phenol-base, polyphenols, naphthols, bis-naphthols, diphenylmethanols, carboxylic amides, thioamides, bixanthene, carboxylic acids, imidazoles, hydroquinones, organic phosphorus compound, and organic silicon compound.

19. (Currently amended) Hydrogen clathrate according to claim 18, wherein said multimolecular host compound is at least one selected from the group consisting of [[urea,]] 1,1,6,6-tetraphenyl-2,4-hexadiyn-1,6-diol, 1,1-bis(2,4-dimethylphenyl)-2-propyn-1-ol, 1,1,4,4-tetraphenyl-2-butyne-1,4-diol, 1,1,6,6-tetrakis(2,4-dimethylphenyl)-2,4-hexadiyn-1,6-diol, 9,10-diphenyl-9,10-dihydroanthracene-9,10-diol, 9,10-bis(4-methylphenyl)-9,10-dihydroanthracene-9,10-diol, 1,1,2,2-tetraphenylethane-1,2-diol, 4-methoxyphenol, 2,4-dihydroxybenzophenone, 4,4'-dihydroxybenzophenone, 2,2'-dihydroxybenzophenone, 2,2',4,4'-tetrahydroxybenzophenone, 1,1-bis(4-hydroxyphenyl)cyclohexane, 4,4'-sulfonyl bisphenol, 2,2'-methylene bis(4-methyl-6-t-butylphenol), 4,4'-ethylidene bisphenol, 4,4'-thiobis(3-methyl-6-t-butylphenol), 1,1,3-tris(2-methyl-4-hydroxy-5-t-butylphenyl)butane, 1,1,2,2-tetrakis(4-hydroxyphenyl)ethane, 1,1,2,2-tetrakis(4-hydroxyphenyl)ethylene, 1,1,2,2-tetrakis(3-methyl-4-hydroxyphenyl)ethane, 1,1,2,2-tetrakis(3-fluoro-4-hydroxyphenyl)ethane, α , α , α' , α' -tetrakis(4-hydroxyphenyl)-p-xylene, tetrakis(p-methoxyphenyl)ethylene, 3,6,3',6'-tetramethoxy-9,9'-bi-9H-xanthene, 3,6,3',6'-tetraacetoxy-9,9'-bi-9H-xanthene, 3,6,3',6'-tetrahydroxy-9,9'-bi-9H-xanthene, gallic acid, methyl gallate, catechin, bis- β -naphthol, α , α , α' , α' -tetraphenyl-1,1'-biphenyl-2,2'-dimethanol, bis-

dicyclohexylamide diphenirate, bis-dicyclohexylamide fumarate, cholic acid, deoxycholic acid, 1,1,2,2-tetraphenylethane, tetrakis(p-iodophenyl)ethylene, 9,9'-bianthryl, 1,1,2,2-tetrakis(4-carboxyphenyl)ethane, 1,1,2,2-tetrakis(3-carboxyphenyl)ethane, acetylene dicarboxyl acid, 2,4,5-triphenyl imidazole, 1,2,4,5-tetraphenyl imidazole, 2-phenyl phenanthro[9,10-d]imidazole, 2-(o-cyanophenyl)phenanthro[9,10-d]imidazole, 2-(m-cyanophenyl)phenanthro[9,10-d]imidazole, 2-(p-cyanophenyl)phenanthro[9,10-d]imidazole, hydroquinone, 2-t-buthyl hydroquinone, 2,5-di-t-buthyl hydroquinone, 2,5-bis(2,4-dimethylphenyl)hydroquinone, and tri-m-trylphosphine.

20. (Previously presented) Hydrogen clathrate according to claim 19, wherein said multi molecular host compound is at least one selected from the group consisting of 1,1-bis(4-hydroxyphenyl)cyclohexane, 1,1,2,2-tetrakis(4-hydroxyphenyl)ethane, 1,1,2,2-tetrakis(4-hydroxyphenyl)ethylene, tetrakis(p-methoxyphenyl)ethylene, tetrakis(p-iodophenyl)ethylene, 9,9'-bianthryl, 1,1,2,2-tetraphenylethane, bis(dicyclohexylamide)diphenirate, bis-dicyclohexylamide fumarate, α , α , α' , α' -tetraphenyl-1,1'-biphenyl-2,2'-dimethanol and 1,1,6,6-tetraphenyl-2,4-hexadiyn-1,6-diol, and 2-(m-cyanophenyl)phenanthro[9,10-d]imidazole.

21. (Currently amended) Hydrogen clathrate enclosing hydrogen which is formed by contact reaction between a host compound and hydrogen, wherein said host compound is ~~at least one selected from the group consisting of monomolecular host compounds, multimolecular host compounds, high-molecular host compound compounds, and inorganic host compounds~~, wherein said high-molecular host compound is at least one selected from the group consisting of celluloses, starchs, chitins, chitosans, polyvinyl alcohols, polymers of polyethylene glycol arm type of which core is 1,1,2,2-tetrakis phenyl ethane, and polymers of polyethylene glycol arm type of which core is α , α , α' , α' -tetrakis phenyl xylene.

22. (Currently amended) Hydrogen clathrate enclosing hydrogen which is formed by contact reaction between a host compound and hydrogen, wherein said host compound is ~~at least one selected from the group consisting of monomolecular host compounds, multimolecular host compounds, high-molecular host compounds, and inorganic host compound compounds~~, wherein said inorganic host compound is at least one selected from the group consisting of clay minerals,

monomorillonites, and zeolites.

23. (Previously presented) Hydrogen clathrate enclosing hydrogen which is formed by contact reaction between a host compound and hydrogen, wherein said host compound is at least one selected from the group consisting of aromatic compounds, amide compounds, alcohol compounds, imidazole compounds, hydroquinones, ureas, carboxylic acids, cyclodextrines, polyphenols, cholic acids, celluloses, and organic phosphorous compounds.

24. (Original) Hydrogen clathrate according to claim 23, wherein said aromatic compounds are phenolic compounds.

25. (Original) A production method of a hydrogen clathrate comprising
a step of dissolving a host compound into a solvent, and a step of recrystallizing the host compound with injecting hydrogen into the solvent, and inserting hydrogen molecules into crystal lattice of the host compound.

26. (Previously presented) A production method of a hydrogen clathrate according to claim 25, wherein said host compound is at least one selected from the group consisting of monomolecular host compounds, multimolecular host compounds, and high-molecular host compounds and inorganic host compounds.

27. (Previously presented) A production method of a hydrogen clathrate according to claim 26, wherein said monomolecular host compounds is at least one selected from the group consisting of cyclodextrins, crown ethers, cryptands, cyclophanes, azacyclophanes, calixarenes, cyclotrimeratrylenes, spherands, and cyclic oligopeptides.

28. (Previously presented) A production method of a hydrogen clathrate according to claim 27, wherein said multimolecular host compound is at least one selected from the group consisting of ureas, thioureas, deoxycholates, perhydrotriphenylenes, tri-o-thymotides, bianthrils, spirobifluorenes, cyclophosphazenes, monoalcohols, diols, acetylene alcohols, hydroxybenzophenones, phenols, bisphenols, trisphenols, tetrakis phenol-base, polyphenols,

naphthols, bis-naphthols, diphenylmethanols, carboxylic amides, thioamides, bixanthene, carboxylic acids, imidazoles, hydroquinones, organic phosphorus compound, and organic silicon compound.

29. (Previously presented) A production method of a hydrogen clathrate according to claim 28, wherein said multimolecular host compound is at least one selected from the group consisting of urea, 1,1,6,6-tetraphenyl-2,4-hexadiyn-1,6-diol, 1,1-bis(2,4-dimethylphenyl)-2-propyn-1-ol, 1,1,4,4-tetraphenyl-2-butyne-1,4-diol, 1,1,6,6-tetrakis(2,4-dimethylphenyl)-2,4-hexadiyn-1,6-diol, 9,10-diphenyl-9,10-dihydroanthracene-9,10-diol, 9,10-bis(4-methylphenyl)-9,10-dihydroanthracene-9,10-diol, 1,1,2,2-tetraphenylethane-1,2-diol, 4-methoxyphenol, 2,4-dihydroxybenzophenone, 4,4'-dihydroxybenzophenone, 2,2'-dihydroxybenzophenone, 2,2',4,4'-tetrahydroxybenzophenone, 1,1-bis(4-hydroxyphenyl)cyclohexane, 4,4'-sulfonyl bisphenol, 2,2'-methylene bis(4-methyl-6-tert-butylphenol), 4,4'-ethylidene bisphenol, 4,4'-thiobis(3-methyl-6-tert-butylphenol), 1,1,3-tris(2-methyl-4-hydroxy-5-tert-butylphenyl)butane, 1,1,2,2-tetrakis(4-hydroxyphenyl)ethane, 1,1,2,2-tetrakis(4-hydroxyphenyl)ethylene, 1,1,2,2-tetrakis(3-methyl-4-hydroxyphenyl)ethane, 1,1,2,2-tetrakis(3-fluoro-4-hydroxyphenyl)ethane, α , α , α' , α' -tetrakis(4-hydroxyphenyl)-p-xylene, tetrakis(p-methoxyphenyl)ethylene, 3,6,3',6'-tetramethoxy-9,9'-bi-9H-xanthene, 3,6,3',6'-tetra acetoxymethyl-9,9'-bi-9H-xanthene, 3,6,3',6'-tetrahydroxy-9,9'-bi-9H-xanthene, gallic acid, methyl gallate, catechin, bis- β -naphthol, α , α , α' , α' -tetraphenyl-1,1'-biphenyl-2,2'-dimethanol, bis-dicyclohexylamide diphenylate, bis-dicyclohexylamide fumarate, cholic acid, deoxycholic acid, 1,1,2,2-tetraphenylethane, tetrakis(p-iodophenyl)ethylene, 9,9'-bianthryl, 1,1,2,2-tetrakis(4-carboxyphenyl)ethane, 1,1,2,2-tetrakis(3-carboxyphenyl)ethane, acetylene dicarboxylic acid, 2,4,5-triphenyl imidazole, 1,2,4,5-tetraphenyl imidazole, 2-phenyl phenanthro[9,10-d]imidazole, 2-(o-cyanophenyl)phenanthro[9,10-d]imidazole, 2-(m-cyanophenyl)phenanthro[9,10-d]imidazole, 2-(p-cyanophenyl)phenanthro[9,10-d]imidazole, hydroquinone, 2-tert-butyl hydroquinone, 2,5-di-tert-butyl hydroquinone, 2,5-bis(2,4-dimethylphenyl)hydroquinone, and tri-m-trylphosphine.

30. (Previously presented) A production method of a hydrogen clathrate according to claim 29, wherein said multi molecular host compound is at least one selected from the group consisting of 1,1-bis(4-hydroxyphenyl)cyclohexane, 1,1,2,2-tetrakis(4-hydroxyphenyl)ethane, 1,1,2,2-

tetrakis(4-hydroxyphenyl)ethylene, tetrakis(p-methoxyphenyl)ethylene, tetrakis(p-iodophenyl)ethylene, 9,9'-bianthryl, 1,1,2,2-tetraphenylethane, bis(dicyclohexylamide)diphenirate, bis-dicyclohexylamide fumarate, α , α , α' , α' -tetraphenyl-1,1'-biphenyl-2,2'-dimethanol and 1,1,6,6-tetraphenyl-2,4-hexadiyn-1,6-diol, and 2-(m-cyanophenyl)phenanthro[9,10-d]imidazole.

31. (Previously presented) A production method of a hydrogen clathrate according to claim 26, wherein said high-molecular host compound is at least one selected from the group consisting of celluloses, starchs, chitins, chitosans, polyvinyl alcohols, polymers of polyethylene glycol arm type of which core is 1,1,2,2-tetrakis phenyl ethane, and polymers of polyethylene glycol arm type of which core is α , α , α' , α' -tetrakis phenyl xylene.

32. (Previously presented) A production method of a hydrogen clathrate according to claim 26, wherein said inorganic host compound is at least one selected from the group consisting of clay minerals, montmorillonites, and zeolites.

33. (Previously presented) A production method of a hydrogen clathrate as claimed in claim 25, wherein said host compound is a multimolecular host compound including phenolic host compound, and wherein the solvent is at least one selected from the group consisting of alcohols including methanol and ethanol, ketones including acetone and methyl ethyl ketone, esters including ethyl acetate, ethers including diethyl ether and dibutyl ether, furans including tetrahydrofuran, amides including dimethyl acetamide, and aldehydes including acetaldehyde and benzaldehyde.

34-35. (Canceled).

36. (Currently amended) A production method of a hydrogen clathrate comprising a step of bringing hydrogen gas into contact with a host compound in a pressurized state, wherein said host compound is ~~at least one selected from the group consisting of monomolecular host compound compounds, multimolecular host compounds, and high molecular host compounds,~~ wherein said monomolecular compound is at least one selected from the group consisting of

cyclodextrins, crown ethers, cryptands, cyclophanes, azacyclophanes, calixarenes, cyclotrimeratrylenes, spherands, and cyclic oligopeptides.

37. (Currently amended) A production method of a hydrogen clathrate comprising a step of bringing hydrogen gas into contact with a host compound in a pressurized state, wherein said host compound is ~~at least one selected from the group consisting of monomolecular host compounds, multimolecular host compound compounds, and high molecular host compounds,~~ wherein said multimolecular host compound is at least one selected from the group consisting of ureas, thioureas, deoxycholates, perhydrotriphenylenes, tri-o-thymotides, bianthryls, spirobifluorenes, cyclophosphazenes, monoalcohols, diols, acetylene alcohols, hydroxybenzophenones, phenols, bisphenols, trisphenols, tetrakis phenol-base, polyphenols, naphthols, bis-naphthols, diphenylmethanols, carboxylic amides, thioamides, bixanthene, carboxylic acids, imidazoles, hydroquinones, organic phosphorus compound, and organic silicon compound.

38. (previously presented) A production method of a hydrogen clathrate according to claim 37, wherein said multimolecular host compound is at least one selected from the group consisting of urea, 1,1,6,6-tetraphenyl-2,4-hexadiyn-1,6-diol, 1,1-bis(2,4-dimethylphenyl)-2-propyn-1-ol, 1,1,4,4-tetraphenyl-2-butyne-1,4-diol, 1,1,6,6-tetrakis(2,4-dimethylphenyl)-2,4-hexadiyn-1,6-diol, 9,10-diphenyl-9,10-dihydroanthracene-9,10-diol, 9,10-bis(4-methylphenyl)-9,10-dihydroanthracene-9,10-diol, 1,1,2,2-tetraphenylethane-1,2-diol, 4-methoxyphenol, 2,4-dihydroxybenzophenone, 4,4'-dihydroxybenzophenone, 2,2'-dihydroxybenzophenone, 2,2',4,4'-tetrahydroxybenzophenone, 1,1-bis(4-hydroxyphenyl)cyclohexane, 4,4'-sulfonyl bisphenol, 2,2'-methylene bis(4-methyl-6-tert-butylphenol), 4,4'-ethylidene bisphenol, 4,4'-thiobis(3-methyl-6-tert-butylphenol), 1,1,3-tris(2-methyl-4-hydroxy-5-tert-butylphenyl)butane, 1,1,2,2-tetrakis(4-hydroxyphenyl)ethane, 1,1,2,2-tetrakis(4-hydroxyphenyl)ethylene, 1,1,2,2-tetrakis(3-methyl-4-hydroxyphenyl)ethane, 1,1,2,2-tetrakis(3-fluoro-4-hydroxyphenyl)ethane, α , α , α' , α' -tetrakis(4-hydroxyphenyl)-p-xylene, tetrakis(p-methoxyphenyl)ethylene, 3,6,3',6'-tetramethoxy-9,9'-bi-9H-xanthene, 3,6,3',6'-tetra acetoxo-9,9'-bi-9H-xanthene, 3,6,3',6'-tetrahydroxy-9,9'-bi-9H-xanthene, gallic acid, methyl gallate, catechin, bis- β -naphthol, α , α , α' , α' -tetraphenyl-1,1'-biphenyl-2,2'-dimethanol, bis-dicyclohexylamide diphenirate, bis-dicyclohexylamide fumarate, cholic acid,

deoxycholic acid, 1,1,2,2-tetraphenylethane, tetrakis(p-iodophenyl)ethylene, 9,9'-bianthryl, 1,1,2,2-tetrakis(4-carboxyphenyl)ethane, 1,1,2,2-tetrakis(3-carboxyphenyl)ethane, acetylene dicarboxyl acid, 2,4,5-triphenyl imidazole, 1,2,4,5-tetraphenyl imidazole, 2-phenyl phenanthro[9,10-d]imidazole, 2-(o-cyanophenyl)phenanthro[9,10-d]imidazole, 2-(m-cyanophenyl)phenanthro[9,10-d]imidazole, 2-(p-cyanophenyl)phenanthro[9,10-d]imidazole, hydroquinone, 2-t-buthyl hydroquinone, 2,5-di-t-buthyl hydroquinone, 2,5-bis(2,4-dimethylphenyl)hydroquinone, and tri-m-trylphosphine.

39. (Previously presnted) A production method of a hydrogen clathrate according to claim 38, wherein said multi molecular host compound is at least one selected from the group consisting of 1,1-bis(4-hydroxyphenyl)cyclohexane, 1,1,2,2-tetrakis(4-hydroxyphenyl)ethane, 1,1,2,2-tetrakis(4-hydroxyphenyl)ethylene, tetrakis(p-methoxyphenyl)ethylene, tetrakis(p-iodophenyl)ethylene, 9,9'-bianthryl and 1,1,2,2-tetraphenylethane, bis(dicyclohexylamide)diphenirate, bis-dicyclohexylamide fumarate, α , α , α' , α' -tetraphenyl-1,1'-biphenyl-2,2'-dimethanol, 1,1,6,6-tetraphenyl-2,4-hexadiyn-1,6-diol, and 2-(m-cyanophenyl)phenanthro[9,10-d]imidazole.

40. (Currently amended) A production method of a hydrogen clathrate comprising a step of bringing hydrgen gas into contact with a host compound in a pressurized state, wherein said host compound is ~~at least one selected from the group consisting of monomolecular host compounds, multimolecular host compounds, and high-molecular host compound compounds~~, wherein said high-molecular host compound is at least one selected from the group consisting of celluloses, starchs, chitins, chitosans, polyvinyl alcohols, polymers of polyethylene glycol arm type of which core is 1,1,2,2-tetrakis phenyl ethane, and polymers of polyethylene glycol arm type of which core is α , α , α' , α' -tetrakis phenyl xylene.